Essential mathematics 2 MST125

Presentation pattern *October to June*

February to September

Module description

Essential Mathematics 2 builds on the concepts and techniques in *Essential mathematics 1* (MST124) to provide a complete foundation for higher-level mathematics studies. Students will be introduced to a broad range of enjoyable and essential topics, such as proof, differential equations, mechanics and discrete mathematics. They will use mathematical software, and learn how to typeset mathematics. Students will need prior knowledge of the material in MST124, especially basic calculus. Alternatively, if they have plenty of study time and a high level of fluency in algebraic manipulation, students can study both MST124 and MST125 together in one year – see our MathsChoices website (mathschoices.open.ac.uk).

Person specification

The person specification for this module should be read in conjunction with the generic person specification for an associate lecturer at The Open University.

As well as meeting all the requirements set out in the generic person specification, you should:

- have a good degree (or equivalent) in mathematics be able to provide a complete understanding of the majority of material in the module and demonstrate the ability to quickly develop an understanding of the remainder of the material
- have the ability to support the development of mathematical skills and study strategies in students who have different interests and aspirations
- be willing to use e-learning facilities, such as:
  - the module website, and other University websites, to download essential material and to retrieve other information
  - University systems for the purposes of monitoring students' progress
  - email and University forums for asynchronous communication with students, tutors, and other staff
  - online tutorials, as an alternative to face-to-face sessions, where appropriate on-screen marking of electronically submitted tutor-marked assignments in pdf format
- be willing to use the module mathematics computer package
- have an interest in the applications of the mathematics covered in the module
- have a good knowledge of at least one of the following mathematical typesetting packages: LaTeX; LibreOffice; Word 2007 or later
- have appropriate IT equipment and skills.

It would be an advantage to have:

- experience of teaching mathematics at this level to adults or students from a broad range of educational backgrounds.

Additional information

- Some students will study *Essential mathematics 1* (MST124) alongside MST125. Some students start their Open University studies with these modules, whereas some may have taken *Discovering mathematics* (MU123) (or its predecessor *Open mathematics* (MU120)) or other modules first.
- MST125 will have an examination (which will consist of both written and computer-marked elements) as well as tutor-marked and computer-marked assignments.
- As students on this module will have the choice to submit their TMAs electronically, via the TMA/EMA service, you will be required to mark and provide feedback on TMAs submitted electronically and to return the marked work as an electronic file. You may also need to mark paper TMAs. If you are invited for an interview and the latter involves an electronic

marking exercise, some guidance will be given for this. Further information and advice will be available should you be appointed to the role.

- The exact nature of e-learning facilities and University systems for monitoring student progress and handling TMAs will evolve in future, and you will need to be prepared to adapt accordingly. Please note that, in accordance with usual University policy, tutors will be expected to use their own equipment for all aspects of e-learning.

Module related details - a full explanation can be found on the website

Credits awarded to the student for the successful completion of a module:	30
Number of assignments submitted by the student:	3
Method of submission for assignments:	1b
Level of ICT requirements:	2
Number of students likely to be in a standard group:	20
Salary band:	4
Estimated number of hours per teaching week:	4